

## ORIGINAL ARTICLE

# Perception and Attitude of Parents towards the Pulpectomy Procedure - A Qualitative Study

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### Abstract

**Aim:** To understand the perception and attitude of parents towards the importance of primary dentition and pulpectomy procedure.

**Methodology:** A qualitative study was conducted through in-depth interviews with parents of pediatric patients aged 4-9 years requiring pulpectomy procedure. The parents who were willing and whose children underwent the pulpectomy procedure, as well as those who were unwilling, were interviewed in the local language through telephone or face-to-face interviews. The answers were recorded, transcribed and translated to English. The questionnaire used in the study assessed the parental knowledge and awareness about the importance of primary teeth and the pulpectomy treatment. Qualitative data were then analyzed using NVivo.

**Results:** Parents in the unwilling group considered the primary tooth and pulpectomy procedure as insignificant since the tooth eventually exfoliates. Parents of children who underwent pulpectomy reported that pulpectomy and crown placement improved the chewing ability of their children.

**Conclusion:** The importance of primary tooth and the need for pulpectomy was accepted by many parents, but lack of knowledge regarding the treatments advised for primary teeth still prevails among the parents.

**Keywords:** Pulpectomy, Pain, Primary teeth, Root canal treatment, Child

### Introduction

Maintenance of the primary dentition in a non-pathologic and healthy condition is important for overall well-being of the child.<sup>1</sup> Dental decay in children's teeth is a significant public health problem affecting 60% to 90% of the children in industrialized countries

(WHO report 2013). Pulpectomy is the last measure to preserve the primary carious teeth with involvement of pulp.<sup>1</sup> Pulpectomy is an ordered clinical process in pediatric dentistry, which involves elimination of infected dental pulp followed by placement of appropriate medicament to obturate the canals.<sup>2</sup>

The prime objective of pulpectomy in an infected deciduous tooth is to eradicate microorganisms and avert reinfection, thus providing a conducive environment for healing of peri-radicular tissues and minimising postoperative discomfort for the child. Creating a root canal space devoid of microbial environment can be achieved by chemo-mechanical preparation, which can be performed using either a single-visit or multiple-visit protocol.<sup>3</sup>

The success of pulpectomy in deciduous teeth is determined by the absence of signs and symptoms, radiographically and clinically. Beyond dental discomfort, the pathological state of the tooth and the clinician's skill are significant factors influencing the success of pulpectomy.<sup>4</sup> Guidelines of both American Academy of Paediatric Dentistry and Brazilian Society of Paediatric Dentistry recommends pulpectomy as the preferred treatment approach with the exception of more advanced cases.<sup>5</sup> Preservation of tooth may be the best treatment for maintenance of overall oral health, space, growth and arch integrity. Furthermore, early loss of deciduous dentition can negatively affect the child's appearance and mechanical function.<sup>6</sup>

Alternatively, the United Kingdom national clinical guidelines report extraction as the most commonly adopted treatment strategy for severe carious primary molars. The popularity of this approach may be attributed to certain factors such as poor cooperation, socio-cultural contexts, type of dental practices (public/private), professional preferences and local guidelines.<sup>3</sup> Although several studies have been performed in relation to the techniques and success rates of pulpectomy, there is lack of literature to understand why parents are not willing for pulpectomy procedure.

## Materials and Methods

Ethical clearance was obtained from the institution. Based on radiographic evaluation, eligible children requiring pulpectomy procedure were selected for the study. Pulpectomy procedure was explained to that patient's parents followed by administration of questionnaire for the parents face-to-face in the department OPD. Based on the responses, two groups were formed: Parents willing for pulpectomy procedure (n=15) and Parents not willing for pulpectomy procedure (n=15), with a total samples size of 30 subjects.

After two weeks, parents in both the groups were contacted over telephone and a telephonic interview was conducted.

## Common questions for both the group (face to face-questionnaire) in dental OPD

- What was your reason for visiting the dentist?
- Is there any need for saving the milk teeth that are pulpally involved? What is your perception regarding the importance of milk teeth?
- Does your child have difficulty in eating due to toothache? How has toothache problem affected your child's routine?
- Were you aware of the treatment option of pulpectomy procedure for milk tooth (milk tooth RCT) for saving pulpally involved teeth?
- Are you willing for your child to undergo pulpectomy procedure in order to save the milk tooth? what is your opinion regarding the procedure?

### Willing parents

- What is your opinion on pulpectomy procedure after undergoing the treatment for your child?
- What do you think about the child's ability to chew food and carry out daily activity now?
- Were you convinced with the need for crown for the tooth that has undergone pulpectomy procedure
- How has the placement of crown helped your child? Are there any drawbacks? What are they?
- Will you recommend pulp therapy for children who are having pulpally involved carious milk tooth?

### Non willing parents

- What were the reasons for not willing for undergoing pulpectomy procedure for your child?
- What do you think about your child's ability to chew food and carry out daily activities now?
- Do you believe the teeth which have undergone pulpectomy require crown placement?
- Will you now recommend pulpectomy treatment option for other children who are having pulpally involved carious milk teeth?

### Inclusion criteria

Children aged 4-9 years who require pulpectomy procedure and their parents who are willing or unwilling for the procedure.

### Exclusion criteria

Parents who refused to answer the questionnaire, incompletely answered the questionnaire, primary teeth



## Discussion

Parents hold the responsibility of maintaining good oral health in their children. Many of them believe that primary teeth are temporary, thus are not worth preserving and consider their treatment as a waste of time and money. Even in developed countries, most parents still take their children to the dentist for radical treatments rather than preventive care. To emphasize the objective of critical importance of primary teeth and pulpectomy procedure, the study was performed to understand the parental perceptions and awareness regarding the primary teeth and the pulpectomy procedure.

In the present study, based on the demographic data, majority of the parents unwilling for pulpectomy procedure were graduates, while the majority of parents willing for pulpectomy had below graduate level education. This indicates that, even with education, awareness and acceptance of pulpectomy procedure was low. The parents with below graduate level of education were able to readily accept, once they were made aware of the treatment (Table 1).

Tomy *et al.*, in their investigation found that a very large section of parents did not understand the need for treating a primary tooth and majority were not even aware of the available pulp treatment options. Few of the parents even believed that treating the primary tooth can damage their children's permanent teeth.<sup>7</sup> The main reasons for either groups to visit dental OPD were, tooth pain, inability to sleep due to pain, inability to chew food, food lodgement, cavity with infection and swelling. Similar findings were observed in a study conducted by Latti *et al.*, where decayed tooth (43%) and pain (26%) were reported by parents as the most common reasons for dental visit.<sup>8</sup> A study done by Jyothisna V *et al.*, stated that routine dental check-up is the last reason for the parents to take their children to the dentist.<sup>9</sup> This result indicates the lack of awareness and poor attitude towards dental visits and routine dental care.

The parents in the willing group believed that the primary tooth needs to be saved as it plays an important role in the chewing ability of the child. Similarly in a study by Al Shuraiqi *et al.*, a high percentage (85%) of parents believed the need for pulp therapy in severely infected primary teeth.<sup>10</sup> Schroth *et al.*, also reported that children of parents who understood the importance of deciduous teeth had a significantly lower caries

activity than those who believed otherwise.<sup>11</sup> Thus, it is of paramount importance to properly care for deciduous teeth and treat them in a timely manner to avoid premature loss.

In the current study, the non-willing group considered milk teeth unimportant as they eventually shed. Similar results were observed in a study conducted by Chandran *et al.*, with few parents considering dental treatment for the primary teeth as unimportant, and a waste of time & money.<sup>1</sup> This observation contrasts the findings of Pradeep *et al.*'s study in Bengaluru, India, where over 60% of parents were willing to spend <200 rupees.<sup>12</sup> Latti *et al.* reported that over 60% parents were ready to spend more than five hundred rupees a month on their child's dental treatment.<sup>8</sup>

In terms of awareness of the parents regarding the pulpectomy procedure, both the groups were unaware of the pulpectomy procedures till the dentist informed them. Concurrent findings were observed in a study conducted by Mahabaleshwar *et al.*, where 56% of the parents were found to be aware of the pulp therapy procedure in primary teeth, while 44% of the parents were completely unaware that pulp therapy procedures can be performed in primary teeth.<sup>13</sup>

According to the parents in the unwilling group, pulpectomy is necessary only for the permanent teeth. Their reluctance was based on the belief that primary teeth will eventually shed, children are highly sensitive and procedures like pulpectomy could potentially affect the eruption of succedaneous permanent teeth; hence parents opted for extraction of primary teeth. According to a quantitative study conducted by Batayneh *et al.*, 91.6% of the parents preferred extraction of primary tooth as the treatment option for relieving pain rather than opting for pulp therapy and crown placement when the child presented with dental pain due to a carious primary tooth.<sup>6</sup>

In a study by Mahabaleshwar *et al.*, when asked about the reasons for not treating primary teeth, 65% of parents believed that the child was too young, 32% felt that the treatment was unnecessary, while the remaining 3% cited cost as the factor.<sup>13</sup> Regarding the need for crown placement, among the willing parents, 60% believed that crowns aid in improving the chewing ability of the child, 30% believed crown placement prevents further infection of the teeth and 10% believed that crown strengthens the teeth. Similar findings were

noted in the study conducted by Najmeh *et al.*, where 70.3% of parents considered stainless steel as the most durable and reliable option for primary teeth compared to any other restoration.<sup>14</sup> Nevertheless, in the current study, the unwilling parents opined that crown placement is not required for primary teeth.

## Conclusion

The importance of primary teeth and the need for pulpectomy was accepted by many parents. But the lack of knowledge regarding the treatment options for primary tooth still prevails even among the educated parents. There is a necessity for enhancing awareness among the parents about the pulpectomy procedure. Hence, as pediatric dentists, we must take a proactive role in raising awareness among the Indian population about the importance of maintaining a healthy primary dentition and the potential consequences of neglecting it. It is also important to inform parents that the child must visit the dentist when the first tooth erupts into the oral cavity and emphasize the need for preventive care.

## Conflict of Interest

Nil

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